Public Policymaking and Research Information

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The public policymaking process presents behavior analysts with opportunities to shape public policy and influence decisions that affect the evolution of communities. Although the scientist-advocate's role in public policymaking has received increased attention, little attention has been given to behavioral analyses of the policymaking context. This paper describes the stages of policymaking, including agenda formation, policy adoption, policy implementation, and policy review. It also analyzes seven types of research information important in agenda formation and policy adoption—information about the dimensions of an issue, number of people affected, relative standing of an issue, interests of those involved, controlling variables, program alternatives, and program acceptability. Methods for communicating research information to policymakers are discussed.

Public policies are decisions made by public officials that commit the government to certain goals (Caputo, 1977; Gerston, 1983, p. 6). These decisions come primarily in the form of laws, executive orders, bureaucratic regulations, local ordinances, and judicial decisions. For behavior analysts, the policymaking process presents opportunities to inform the analysis of social problems and the selection, implementation, and evaluation of means to address social goals.

The role of the scientist-advocate in the public policymaking process has received increasing attention in the field of psychology (Carpenter, 1983; Greenberger, 1983; Maccoby, Kahn, & Everett, 1983; Masters, 1984; Pallak, 1982). The belief that policymaking can significantly influence the behavior of large numbers of people may contribute to curiosity about the policymaking process among scientists and to hope for human improvement among social advocates (Masters, 1984; Robinson, 1984; Zigler & Meunchow, 1984). With a few exceptions (e.g., Schlosberg, Czyzewski, Plante, & Otis, 1985), however, the involvement of behavior analysts in policymaking has been limited, and analyses of behavior-environment relationships in the policymaking context rare.

Presumably, psychologists and other social scientists might develop information or apply their special knowledge and skills in a way that could contribute to public policy formulation and enactment. For example, case study (Fawcett & Seekins, 1981) and experimental research (Jason & Rose, 1984) suggest that research information provided by behavioral psychologists may influence the votes of state legislators on particular bills, such as child passenger safety laws. Nonetheless, behavior analysts (Stolz, 1981), psychologists (Rappaport, 1977), and other researchers (Weiss, 1977) have also expressed frustration over the lack of research utilization by policymakers when apparently relevant information is available.

Kingdon (1981) notes that policymakers make a large number of decisions without having the time or resources to review all relevant information. Her research suggests that decision-makers are selective in the types of information they seek and the sources they use. An understanding of the behavioral relationships operating in policymaking contexts might improve the effects research information has in public policymaking. It may also help researchers develop more accurate assessments of their likely impact on particular policy decisions.

The purpose of this paper is to expli-

cate the types of information behavioral researchers might provide to policymakers and how it might be delivered in order to shape public policy. First, an overview of the policymaking process is presented. Second, the information needs of policymakers in legislative settings during agenda formation and policy adoption are examined. Finally, methods for delivering research information are discussed.

THE PUBLIC POLICYMAKING CONTEXT

Government institutions are the primary means for formulating and implementing public policy (Gerston, 1983). Policymaking occurs within six general areas: legislative, executive, judicial, bureaucratic, and regulatory institutions, and often by public referendum. Considering just the executive, legislative, and judicial branches at the federal, state, and city levels (for cities with populations over 100,000), there are 612 major institutional bases for public policymaking in the United States (Greenwald, 1977, p. 11).

Exchange theories of political science define law and public policy as a statement of a contingency of reinforcement maintained by the government (e.g., Waldman, 1972). In this analysis, lawmaking involves reciprocal relationships among public officials, lawmakers, and the governed (Skinner, 1953, p. 339). Lawmakers create and enforce laws and policies that regulate and distribute resources. The governed differentially reinforce lawmaking by complying with laws, voting, contributing to political campaigns, and delivering other forms of support. Public officials, in turn, reinforce support by creating and enforcing laws and policies that produce consequences desired by supporters.

In the evolution of social arrangements called communities (Skinner, 1981), decision makers select policies that specify environmental arrangements likely to produce desired consequences for the community. Policymaking consequences that are particularly important for communities include avoiding or terminating conflicts over social arrangements and allocation of valued resources (Schattschneider, 1960). For example, the sale of houses by a city for delinquent taxes could become an issue on a community's agenda. One citizen group might propose that sale contracts include provisions that a purchaser live in the house for at least one year and that no family own more than one house at a time. In response, a second group might propose that the houses continue to be sold to the highest bidder with no requirements placed on their use. The former arrangement increases immediately available houses to low- and moderate-income families. The latter proposal favors immediate capital formation by real estate entrepreneurs and may stimulate a few construction jobs. Either set of environmental arrangements could produce important consequences for the community. Public policymaking determines whose claims, what goals, and whose values will prevail.

Stages of Public Policymaking

Public policymaking involves citizens, public officials, and institutions in a process that occurs in four predictable stages—agenda formation, policy adoption, policy implementation, and policy review (Cochran, Mayer, Carr, & Cayer, 1982; Palumbo, Fawcett, & Wright, 1981). The major events of each of these stages are outlined below.

Agenda formation. The occasion for policymaking is set when a large number of citizens experience a common problem (Gerston, 1983), even though individual citizens may not react to the problem in the same way (Cochran et al., 1982). Common problems such as health and affordable housing might be viewed as consequences of current or past policies or other environmental conditions. As a problem is discussed, various goals and alternatives for its resolution emerge. Alternatives specifying novel social arrangements constitute potential issues for the agenda and new variations by which communities can evolve.

Public officials (e.g., chief executives,

legislators, and judges), the media, interest groups, bureaucrats, and individual citizens use information and publicity to develop issues. As the scope and intensity of an issue develops, the likelihood of formal consideration of one or more alternatives by a policymaking institution increases. For example, Levine (1981) described how public information about the prevalence of neuropsychiatric disorders experienced by military recruits for World War II, deteriorating conditions in psychiatric facilities, and research findings about promising social and pharmacological treatments helped propel mental health reforms onto the national public agenda in the 1950's and 1960's.

Policy adoption. Once a problem has emerged on the agenda, either a substantive or a symbolic decision may result (Gerston, 1983). Substantive decisions involve allocating a significant amount of resources, usually in the form of taxes and expenditures. For example, a decision to increase the hospital deductible for Medicare patients or to reduce covered hospital days is a substantive decision. These decisions produce significant consequences for many people.

By contrast, symbolic decisions involve recognizing a need without allocating sufficient resources to have a reasonable chance of solving the problem. Establishing study committees or special observances, such as a week commemorating the rights of citizens with disabilities, are common forms of symbolic decisions. Symbolic decisions usually address narrow or weak constituent groups (e.g., abused children), issues for which there are no obvious solutions (e.g., crime), or complicated items (e.g., international human-rights policies).

Policy implementation. Once a policy has been established, it usually must be translated into government action in order to achieve its aim. Implementation often involves interpretation and creation of additional policies by bureaucratic and regulatory authorities (Cochran et al., 1982; Gerston, 1983). Policy implementation occurs through executive delegation of responsibility to an agency, development of implementation guidelines, intricate coordination within and between agencies, and execution of tasks. At any point, a new policy and its implied practices may be accepted, modified, resisted, or rejected.

Gerston (1983, p. 104) identifies several aspects that will facilitate or impede policy implementation. If policies are well funded, contain explicit contingencies for receipt of resources, limit the number of agencies involved, and execute oversight, then they are more likely to achieve their goals. Conversely, if policies permit bureaucratic discretion, lack funding, contain multiple goals, or lack monitoring, then they are less likely to be adequately implemented.

Policy review. Cochran et al. (1982, p. 6) state that policy review involves both empirical and normative judgments of the value and satisfaction with tangible and symbolic consequences of policy implementation. Review may occur in the contexts of administrative evaluation, legislative oversight, and public debate. The results of review may include maintenance of implementation, modification of policy, or cancellation. In this stage, as in the previous stages, public support, as well as demands for change, are important ingredients to the outcome (Caputo, 1977, p. 2).

The four stages of policymaking—from agenda formation to policy review—provide many opportunities for involvement by behavioral researchers at all levels of government. Keefe and Ogul (1985, p. xi) suggest the legislative branch may be the best focus for involvement. It is in legislative contexts that persistent struggles occur over allocating government benefits. The remaining analysis focuses on providing research information in the legislative decision making contexts of agenda setting and policy adoption.

RESEARCH INFORMATION AND PUBLIC POLICYMAKING

A number of policy analysts (e.g., Takanishi, 1981) and other scientists (e.g., Wallis & Roberts, 1956) suggest that re-

search information—knowledge gathered by careful study using established scientific methods—may be useful to legislators attempting to make optimal decisions. Weiss (1977) identified two main uses of research information. First, it may be used to enlighten officials about an issue or set the agenda by identifying issues for debate. Second, it may be used instrumentally by suggesting alternative policy actions from which public officials may choose.

The enlightenment and instrumental functions of research information parallel the general prompt and specific prompt formulation of antecedent stimuli proposed by Geller, Winett, and Everett (1982, p. 21). In this case, information about a social problem acts as a general prompt by directing attention to an issue without suggesting a particular policy response. Information about alternative solutions may act as a specific prompt for public officials to adopt specific policies in response to an issue. For example, research information indicating that thousands of children are improperly immunized, and that this leads to increased rates of childhood disease, may serve as a general (enlightenment) prompt for policy action. Research information describing simple and inexpensive procedures that can significantly increase immunization rates (e.g., Yokley & Glenwick, 1984) may serve as a specific (instrumental) prompt for adopting policies that require such programs.

Research information may facilitate the discriminations involved in producing laws that are more likely to influence citizens' behavior and to maintain constituent support of the government. Such information may function as discriminative stimuli that set the occasion for reinforcement of actions by decision makers. For example, a city commissioner's votes for a new ordinance may be more likely to occur in the presence of information about a program's acceptability to constituents. This information may be discriminative for positive consequences, such as campaign contributions, or may help avoid negative consequences, such as constituent votes or campaign contributions for an opponent.

Research Information and Agenda Formation

Determining what issues are discussed in the policymaking process may be the single most powerful political act (Cobb & Elder, 1972; Lukes, 1974; Parenti, 1970; Walker, 1977). Setting the agenda involves deciding whose claims on what resources will be considered and the potential range of alternative social arrangements. Such decisions limit the behaviors and variables to be considered. Several types of information may be useful in this phase of decision making, including information about the dimensions of an issue, the number of people involved, the relative standing of an issue, and the interests of those involved.

Dimensions of an issue. Policy analysts agree that the first step in developing research information is to define the problem (e.g., Quade, 1975; Stokey & Zeckhauser, 1978). This involves specifying, describing, and grouping behaviors and their relationships to antecedent and consequent events relevant to a problem (Rein & Schon, 1977). These efforts may involve such diverse methods as performance indicators (Walker, 1977), ethnographic reports (Agar, 1980), descriptive statistics (Wallis & Roberts, 1956), and metaphors that label grouped variables in ways that imply solutions (Rein & Schon, 1977).

For example, Jones (1976) described two competing definitions of the problem of a neighborhood health clinic's underutilization. The first problem definition was based on generalizations from anthropological studies. It used variables such as subcultural health values of the low-income blacks targeted by the program to define the problem. This individualistic formulation suggested solutions involving patient re-education and use of indigenous social networks to disseminate information by word of mouth. In the second definition, environmental variables, such as disrespectful treatment by clinic staff and lack of posted information about the clinic, were used to define the problem. This formulation, which was later confirmed, suggested specific efforts to improve treatment by staff, pub-

licize services, and reduce obstacles to acquiring services.

Descriptive field studies (Bijou, Peterson, & Ault, 1968) may provide important information about behavior and its relations to antecedent and consequent events. They may be useful to officials because they suggest variables that may be manipulated to set the occasion for behavior, reduce the prevalence of a problem, or reinforce citizen support. Behavior analysts might contribute this type of information to policy formation by presenting analytic descriptions of behavior-environment relations for socially problematic situations. For example, in the case cited above, field observations concerning the importance of posted information about services (i.e., antecedent variables) and respectful treatment by staff (i.e., consequent variables) contributed to policy changes in the program.

Number of people affected. Scale theories of public decision making suggest that the more people involved in an issue, the greater the scale of real or potential conflict, such as complaints and demonstrations (e.g., Schattschneider, 1960). Further, the likelihood that any conflict will escalate appears to increase the longer a problem situation remains unresolved. These same theories suggest that public officials' policymaking will be negatively reinforced if the policies or laws created reduce real or potential conflicts. This occurs when complaints, demonstrations, or threats of removal of support decline following a decision.

Accordingly, information that a large number of people is involved in an issue may serve to set the occasion for formally introducing the issue into debate and considering policy alternatives designed to limit or resolve a conflict. For example, issues concerning education may command a great deal of attention from public officials partly because of the number of people involved. Demographic research information, such as census data describing the number of people likely to be affected by utility rate subsidies (Fawcett, Seekins, Whang, Muiu, & Suarez de Balcazar, 1984), may be influential. Similarly, behavioral assessment data describing the number of people actually experiencing a problem, such as child passengers observed to be at risk to injury (Fawcett & Seekins, 1981; Jason & Rose, 1984), may be particularly important to decision makers.

Conversely, attending to an issue affecting only a few people may take valuable time away from an issue important to a larger number of people. Thus, reinforcing the demands of a small number of people with action on one policy may remove or delay reinforcement for many others whose issues were not considered. Behavior analysts have observed that aversive consequences or the removal of reinforcement may produce emotional responses and elicit aggression (Freedman & Freedman, 1975). Research information identifying issues affecting large numbers of people may increase the likelihood of decision makers' responses to avoid verbal attacks or the discontinuance of support resulting from inaction.

Relative standing of an issue. Public officials are confronted by a larger number of issues than they can address with limited time and resources (Pierce & Lovrich, 1982; Weiss, 1977). Thus, decisions must be made about which issues to address (Walker, 1977). Cobb and Elder (1972) and Walker (1977) suggest that information showing the relative standing of a particular issue to other issues, in the opinion of various publics, may help identify those issues for which policy action may produce the greatest amount of support. Rich (1977), for example, points to the growing use of survey research information, such as that provided by the Gallup and Harris polls, as evidence of the importance of this type of information.

Selecting issues for the public agenda involves disagreements over the regulation of relatively important behaviors and conditions, or the distribution of relatively valuable resources. The greater the value of these behaviors and resources, the greater the likelihood they might control citizens' behaviors or act as reinforcers for the public support that placed an official in office. For example, survey results that show fear of crime as a top-rated issue may lead policymakers to hold hearings, commission studies, propose

new legislation or ordinances, and even vote for new laws that prescribe punishment for undesired behaviors and fund agencies to deliver the consequences. Survey research information that suggests the relative standing of a public issue may help decision makers select issues and alternatives that are more likely to produce public support.

Interests of those involved. Coleman (1972) suggests that information about the various interests of those involved in a conflict over regulating behavior or distributing resources is important to public officials. Such information might be presented in the form of identified objectives of competing groups (Quade, 1975), descriptive field studies of consequences of current behavior (Bijou et al., 1968), and citizen ratings of the social importance of various consequences (Wolf, 1978). The potential intensity of conflict between groups is suggested by the discrepancies between their competing claims on important consequences and may be discriminative for action.

Information about conflict between constituents over valued consequences, and related criticism of inaction, may control the creation of public policy designed to resolve it. For example, a legislative committee hearing on mandatory use of child-passenger safety seats may include testimony from different interest groups regarding such consequences as reduced risk of injury and death for children, increased cost in time (for buckling) and money (for seat purchase) for parents, reduced insurance costs, and state infringement on individual freedom. Information about the objectives of conflicting groups may serve as criteria for developing and evaluating alternatives that may be acceptable to various parties in a dispute.

Research Information and Policy Adoption

Once a problem has made its way to the public agenda—whether through information provided by research or other means—public officials must act to re-

solve the implied conflicts. Information that suggests solutions by focusing on controlling variables, offering program alternatives, and validating their social acceptability may be particularly important at this point.

Controlling variables. Public officials use three general methods to solve problems, including educative, facilitative, and punitive strategies (Balch, 1980). Information about variables controlling behavior of those involved may suggest effective policy methods. Weiss and Bucuvalas (1977) state that such information should avoid nonmanipulable variables such as race or age. Rather, information should focus on variables that can be changed, such as positive and aversive consequences, availability of educational programs to establish new behaviors, and eligibility for services required to perform desired responses. For example, research information showing that a 30% rebate on the cost of home solar energy devices produced a 20% increase in adoption from near zero levels, and a 5% statewide energy savings, might suggest the possible function of tax incentives for adoption. Such tactical research information may suggest how public officials might use such methods as media information, education, tax incentives, or fines and imprisonment to have either direct or indirect impact on dependent variables of interest (Bulmer, 1981).

Program alternatives. Bulmer (1981) suggests that information about specific program arrangements, or combinations of independent variables, and the effects they produce may be the most potent type of research information available to public officials. Such functional analyses consist of demonstrations of the effects of combinations of independent variables, such as treatment programs, on important dependent variables in the real world. Good examples include summative research involving the Behavior Analysis Follow Through or Achievement Place models. Note, however, that, as with the termination of Behavior Analysis Follow Through, such information may not en-

sure adoption of specific programs in the absence of other conditions, such as intense public demand. Rather, such summative research may exert control if adoption of past policies in the presence of similar information produced public support or reduced conflict.

Such technical information may be important because it suggests precedents for using policy choices that reliably produce certain consequences such as increased reading ability in disadvantaged children or reduced recidivism in delinquent youths. Information about how such models work and their consequences may be particularly effective if the models have been adopted by other decision makers in similar cities or states.

Program acceptability. Wolf (1978) identifies three dimensions of assessing social acceptability for program alternatives—the importance of goals, acceptability of procedures, and significance of effects. Such information, if it relates to the policy alternatives offered, might help public officials choose alternatives having the greatest likelihood of reinforcing public support. For example, information that a majority of citizens find additional charges for passive restraints in new automobiles less acceptable than mandatory seat belt laws might lead officials to avoid new car safety standards and create seat belt regulations. Although giving people what they say they want does not always produce desired outcomes, such as increased safety, information about constituent preferences may suggest actions more likely to produce positive consequences and avoid negative consequences for officials.

Behavior analysts might provide this type of information for general policies, as well as for specific program alternatives. For example, Fawcett and Seekins (1981) and Jason and Rose (1984) presented information on the social acceptability of child passenger safety legislation to policymakers at the point of enactment of state legislation. Such systematic application of social validation procedures for policy alternatives may be particularly valuable to decision makers

in legislative and executive branches (Seekins & Fawcett, 1983).

DELIVERING RESEARCH INFORMATION

Greenwald (1977, p. 69) identifies three important aspects of delivering information to policymakers—content, target, and method. Content has been discussed above with respect to agenda formation and policy adoption. Information may be targeted upward to key officials, such as potential bill sponsors or agency administrators, or to all relevant decision makers, such as in a presentation to a county commission. It may also be targeted downward to activate constituent pressure, such as in a mass mailing to members of the National Rifle Association. Information may also be delivered laterally to similarly affected groups such as might occur in developing alliances between farmers' organizations and those supporting food for the hungry.

Methods for delivering policy-relevant information to policymakers have been described by the League of Women Voters (1972a, 1972b, 1976), the U.S. Chamber of Commerce (Lustberg, 1982), and others (e.g., Gonzalez, 1984; Greenwald, 1977; Kingdon, 1981). These include tactical considerations of lobbying, such as cultivating information channels, developing committee staff relations, and providing prepared statements for officials' use. Several psychologists have also discussed how to use the mass media to disseminate policy-relevant research (e.g., McCall, 1985; Morris, 1985) and how to prepare policy-relevant research reports for legislators (Takanishi, 1981). It is appropriate here to view these efforts from a behavioral perspective that may generate further analysis.

Functions in Providing Research Information

Direct delivery of information is considered the most effective, simplest, and cheapest of all lobbying techniques (Greenwald, 1977). Information may be delivered directly through personal

meetings with decision makers, participating in bill drafting, or testifying at hearings. In her terms, ". . . information [is provided] to activate, reinforce, strengthen, and remind officials of commitments" (Greenwald, 1977, p. 69).

Although research information may act as a general or specific prompt, it does not specify a response requirement for reinforcement. Past decisions and the success of various types of information in facilitating reinforcement for policy-making responses have had a long history. Research knowledge is a relatively new source of information about consequences of policy decisions, and it is only one among many.

Antecedent stimuli function more effectively when they are presented immediately before an opportunity to respond in conditions that produce reinforcement (Geller et al., 1982). But antecedent stimuli, such as research information, may require time to become established as discriminative stimuli. In fact, legislators value frequent constituent contact and multiple presentations of information (Gonzalez, 1984). Information can be provided to legislators in such contexts as personal meetings, meetings with legislative research staff, or public hearings. These occasions provide opportunities for providing social approval and other positive consequences following a decision maker's responses consistent with the information being provided.

The agenda setting and policy adoption process is often long and typically involves a large number of people. Researchers, acting as policy advocates armed with data, might present their data-based policy recommendations frequently in those situations in which public officials' statements of understanding and support for policies consistent with the data may be reinforced. Presentations might be programmed first to shape policy support in environments with the least likelihood of disapproval from opponents, such as personal meetings with sponsors and legislative aides. Later, research information might be presented,

and differential reinforcement for support provided, in more complex and uncontrolled environments, such as in meetings with opposition groups or public hearings.

Of interest to both researchers and advocates are procedures that facilitate the acquisition of relevant information by decision makers, the establishment of support for empirically-grounded alternatives, and the generalization of effects of research information and differential reinforcement to complex and potentially hostile environments (Sulzer-Azaroff, 1985). Attention might be focused on analyzing desired responses of decision makers, organizing research information in formats that reduce response requirements, scheduling presentations of information, and delivering consequences for reference to and reliance on research information. Methods for measuring the effects of procedures implemented in various issue contexts are also needed.

CONCLUSION

This analysis has suggested several types of research information that may be useful to public officials attempting to maximize the outcome of their decisions. No one source of information (e.g., a particular study or individual) for all of these types of information, however, is sufficient. Weiss (1977) found that officials rely on redundancy to confirm the information on which they act, much as behavioral researchers rely on interobserver agreement to enhance believability of research findings.

Research information is only one of many sources of information about possible consequences of policy decisions. Observations and judgments about the effects of policy choices on the interests of powerful individuals who control consequences for decision makers, beliefs about the causes of human behavior, rumors about past consequences, legal constraints, and personal goals also contribute to the decision process (Parenti, 1970; Takanishi, 1981).

Analyses of rule-governed behavior

(Skinner, 1969, p. 121) suggest that rules for making decisions may be particularly helpful for policymakers who have not been adequately exposed to the complex and unclear contingencies of policymaking. Advice and warnings from more experienced policymakers and personal aides and supporters may conflict with or support recommendations suggested by research reports. Control exerted by both rules and research information will depend on the policymaker's history of reinforcement for responding to similar situations in the presence of such instructions or information.

Timing is an important ingredient in policymaking. Conditions and information that facilitate optimal choices do not always coincide. Research information about effective programs for solving human problems may not influence policymaking if there are few reinforcers for government officials who act on the underlying problem or if past adoption of similar policies resulted in criticism or loss of support. Similarly, demands by the public for solutions to problems may go unanswered until appropriate program alternatives are discovered or developed.

To maintain their positions, elected officials require public support, money, votes, and other events controlled by the governed. Economic interest groups, such as those representing large corporations or organized labor, and social interest groups, such as those identified with conservative or liberal causes, are often able to deliver especially powerful consequences, even though they may represent interests of a small, but unified, minority. Utilitarian notions of the most good to the greatest number, even when supported by scientific data, may be offset by desires of such organized groups. For example, Greenwald (1977, p. 2) summarizes a case in which milk producers promised a two million dollar campaign contribution contingent on a one cent rise in dairy price supports. This provided an increase of 10 to 50 million dollars in profits for dairy producers. Conversely, the most valid research-based conclu-

sions are unlikely to control policy selection if a majority of concerned citizens are opposed, even if on apparently irrational grounds.

In summary, in order for research information to influence public policy, it should focus on policymakers' behavior and the variables antecedent and consequent to it. Such information can function as discriminative stimuli that signal the likelihood of reinforcement for action by decision makers. Seven types of information that fill this function were described, and methods for delivering the information were discussed. By analyzing the policy-creation process and by providing research information consistent with such analyses, behavior analysts can contribute to the formulation and adoption of policies that produce desired consequences for communities.

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